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September 11, 2002

Brent Renfrow WDFW Area Habitat Biologist 201 N. Pearl Ellensburg, WA 98926

RE: Yakima River - City of Cle Elum Water Supply

RECEIVED

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WDFW OFFICE OF THE DIRECTOR

Dear Brent:

I want to offer you my sincere thanks for your extremely prompt response and help in resolving the City of Cle Elum's water intake problem yesterday. In today's climate of lengthy paperwork and indecision concerning water-related activity, your quick and decisive action is most refreshing. The cooperative win-win environment that occurs in the Cle Elum area makes our work on the Yakima and Cle Elum Rivers pleasant and rewarding.

The Geomax design that stabilized the South Cle Elum Bridge; improved the City of Cle Elum water intake and enhanced the fishery was tightly constrained. These constraints included:

1. The bed scour in the North Channel had to be eliminated in order to protect the bridge.

2. The South Channel needed to be reactivated so that the City of Cle Elum water intake would remain functional.

3. The river's conveyance area at the bridge could not be made smaller because the FEMA defined flood capacity had to be maintained.

4. The mid-stream island/wetland complex needed to be protected to the maximum degree possible.

5. The fishery needed to be protected and enhanced because salmon spawn in the immediate area.

Our design involved the minimum construction activity possible that "threaded the needle" between these constraints. It was intended that the changes we made to the system would cause the river to modify its channels during high water events. By letting the river do most of the work, the project goals could be accomplished and the fishery could be enhanced. Before the river can reach this new equilibrium, considerable bedload needs to be deposited in the North Channel under the bridge. Once this deposition occurs, the South Channel should receive a substantially increased flow. Added flow in the South Channel will not only solves the city's intake problem but will also create addition high quality, in-stream habitat for fish. Unfortunately, while this switch-over is occurring, the small channels that carry low flow from the North Channel to the South Channel can have gravel plugs form in their mouths.

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In the future, minor gravel plug removal may be needed (like what was accomplished yesterday) to ensure that the city's water intake remains functional. Geomax recommends that any decision to remove gravel plugs be made immediately after the fall "flip-flop" occurs. Working at this time will provide fish superior access to the South Channel; give the city their needed water and not impact spawning.

Again a hardy thanks for all your help. It was most appreciated.

Sincerely yours,

Dr. Donald R. Reichmuth, P.E.

President, Geomax, P.C.

Copies:

Dr. Jeffrey P. Koenings, Director, WDFW
Pat Massey, FEMA, WA Program Coordinator
Mike Cecka, Cle Elum City Manager
Jim Leonhard, Cle Elum Water Superintendent
Jeff Louman, Huibregtse, Louman Assoc. Inc.